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CLAIMS:

1.   A block artifacts detection device (100) for detecting block artifacts in a video
signal, the block artifacts detection device (100) comprising:
-          computing means (102) for computing a gradient signal on basis of the video
signal;
-          establishing means (104) for establishing a list of samples corresponding to
respective local maximum values of the gradient signal;
-          histogram determining means (106) for determining a histogram of inter-
sample distances, a first one of the inter-sample distances corresponding to a first distance
between a first one of the samples and a second one of the samples succeeding the first one of
the samples, and a second one of the inter-sample distances corresponding to a second
distance between the first one of the samples and a third one of the samples succeeding the
second one of the samples; and
-          analyzing means (108) for analyzing the histogram of inter-sample distances
and for producing a block artifact indicator on basis of the histogram.

2.   A block artifacts detection device (100) as claimed in claim 1, whereby the
block artifact indicator corresponds with a spatial size of the block artifacts, the block artifact
indicator being related to a particular inter-sample distance.

3.   A block artifacts detection device (100) as claimed in claim 1, whereby the
block artifact indicator corresponds with a measure of visibility of the block artifacts, the
block artifact indicator being related to a frequency of occurrence of a particular inter-sample
distance.

4.   A block artifacts detection device (100) as claimed in claim 1, whereby the
histogram of inter-sample distances is a weighted histogram.

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5.   A block artifacts detection device (100) as claimed in claim 4, whereby a weighting of the first distance is based on the local maximum value of the first one of the samples.

5   6.   A block artifacts detection device (100) as claimed in claim 5, whereby the weighting of the first distance is based on a portion of the gradient signal comprising a sub-portion corresponding to the first one of the samples.

7.   A block artifacts detection device (100) as claimed in claim 1, whereby the
10   gradient signal is computed on basis of a first intermediate signal being computed by summation of respective pixel values of a number of video lines of the video signal.

8.   A block artifacts detection device (100) as claimed in claim 1, whereby the gradient signal is computed by high-pass filtering of a first intermediate signal which is based
15   on computing absolute differences between subsequent pixel values of the video signal.

9.   An image processing apparatus (800) comprising:
-       receiving means (802) for receiving a video signal corresponding to a sequence of input images;
20   -   a block artifacts detection device (100) for detecting block artifacts in the video signal, as claimed in claim 1; and
-       an image processing unit (804) for calculating a sequence of output images on basis of the sequence of input images, the image processing unit being controlled by the block artifacts detection device (100).

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10.   An image processing apparatus (800) as claimed in claim 9, characterized in further comprising a display device (806) for displaying the output images.

11.   A method of detecting block artifacts in a video signal, the method
30   comprising:
-       computing a gradient signal on basis of the video signal;
-       establishing a list of samples corresponding to respective local maximum values of the gradient signal;

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-        determining a histogram of inter-sample distances, a first one of the inter-sample distances corresponding to a first distance between a first one of the samples and a second one of the samples succeeding the first one of the samples, and a second one of the inter-sample distances corresponding to a second distance between the first one of the

5   samples and a third one of the samples succeeding the second one of the samples; and

-        analyzing the histogram of inter-sample distances and producing a block artifact indicator on basis of the histogram.

12.   A computer program product to be loaded by a computer arrangement,

10   comprising instructions to detect block artifacts in a video signal, the computer arrangement comprising processing means and a memory, the computer program product, after being loaded, providing said processing means with the capability to carry out:

-        computing a gradient signal on basis of the video signal;

-        establishing a list of samples corresponding to respective local maximum

15   values of the gradient signal;

-        determining a histogram of inter-sample distances, a first one of the inter-sample distances corresponding to a first distance between a first one of the samples and a second one of the samples succeeding the first one of the samples, and a second one of the inter-sample distances corresponding to a second distance between the first one of the

20   samples and a third one of the samples succeeding the second one of the samples; and

-        analyzing the histogram of inter-sample distances and producing a block artifact indicator on basis of the histogram.